

homedistiller.org's
Tried And True Recipe Book

metric units version 0.05

HEFEZELLE

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This document has hyperlinks integrated into it. When reading it on a computer, you can click on blue text to jump within the document, while red text will open your browser and take you someplace on the internet.

Preface

This is a unifying compilation of some recipes posted on homedistiller.org's [forum subpage](#), where recipes for mashes and washes are actively developed. Recipes that stand the test of time, excel in ease-of-use, consistently convince tasters, impress with cost efficiency and similar desirable properties, are awarded the title of a *Tried And True* recipe.

As a natural consequence of being conceived and compiled by a variety of individuals from around the globe, the recipes on aforementioned forum vary wildly not just in the product that they promise, but also in level of detail on instructions, in the units used (metric vs imperial), in the volumes envisioned for the mash, and in the overall presentation of the recipe in question. This very document seeks to give common frame and form to the *Tried And True* recipe collection.

In order to achieve this unifying presentation, the author reserves the freedom to restructure and rephrase large portions of a recipe, to scale it up or down, to convert units, and generally perform edits, always with the intent not to alter the recipe, but to lay it out in a consistent, easily understood and pleasant-to-read manner.

The price to pay for using this condensed format is a loss of discussion and information. Since the original forum threads are well capable, suited and actively being used to answer questions about specific details of a recipe, to portray a pluralism of opinions and experiences with a single recipe, and to develop variations of recipes, the author would strongly recommend taking a look at them! The title of each recipe is hyperlinked to the homedistiller.org thread discussing the recipe.

Quite a few technical terms from the craft of brewing and distillation will be used within this document without explaining them. You are encouraged to acquaint yourself with the following terms, as they will be used from here on out: [ABV](#), [backset](#), [carboy](#), [charge](#), [cuts](#), [dunder](#), [feints](#), [foreshots](#), [heads](#), [hearts](#), [lees](#), [low wines](#), [mash](#), [pH](#), [racking](#), [spirit run](#), [still](#), [stripping run](#), [sugarhead](#), [syphoning](#), [tails](#), [trub](#), [wash](#).

My thanks go out to the original crafters of the included recipes; to the people who maintained and improved them; to the staff and members of homedistiller.org; to everyone who offered critique or words of encouragement to me while I wrote this, specifically my friends that turned into test readers; and finally to those reading the document, you spending time with this document is what made my writing it worthwhile!

HEFEZELLE,
Vienna, May 28, 2018

Universal Instructions

This is the metric version of this document, meaning that temperatures will be given in degrees Celsius ($^{\circ}\text{C}$), mass in kilograms (kg) or grams (g), and volume in liters (L), milliliters (mL) or in household quantities such as teaspoons (≈ 5 mL), tablespoons (≈ 15 mL), or cups (≈ 237 mL). There exists a version of this document using US units.

All mash and wash recipes have been scaled linearly to target a final volume of **100 liters**. If your fermenter volume differs, you need to scale the ingredient lists accordingly: Assuming your volume is x liters, then that's $x\%$ of 100 liters, and you then want to use $x\%$ of all ingredient amounts listed.

Recipes for cordials, infusions, macerations, cocktails and the like have been scaled for the production of **1 liter**.

0.1 Tools

Depending on what recipe you choose to follow, some of these tools might be unnecessary, some could be helpful but avoidable, and some will be indispensable. This list should give you an idea of what might come in handy.

- **Writing Materials**

Take detailed notes about your ingredients, recipes, processes, dates and results. Label your fermenters. Keep your notes near, all in one spot that's not prone to being flooded with spillage or otherwise endangered of being corrupted. This document intentionally has large margins to the left and right, giving you opportunity to make annotations to the text.

- **Calculator**

Most likely you will have to scale ingredient listings, or you have to do calculations while weighing. It will facilitate operation if you have a calculator within reach when that happens. A conversion table for different units will prove equally convenient.

- **Heat Source**

Next to carbohydrates and the work hours you put in, the biggest running cost is typically fuel consumption. Heating with electricity is very safe, but also expensive and slow to react. Heating with natural gas or propane is very easily controlled, but a huge hazard when dealing with alcohol in high concentrations, and great care must be taken not to burn the mash - a problem that is circumvented by heating the boiler not directly on the flame, but in a pressurized water bath, or by

engineering a steam cooking setup. Solar power is another heat source that you might want to tinker with, eg. by use of parabolic mirrors, or employing solar-heated warm water. Wood might be viable where it is abundant, but it is difficult to control and open flame poses a risk.

- **Pot**

Have a vessel that allows for a large volume of liquid to be boiled.

- **Fermenter**

The vessel(s) that you use for fermenting must be food grade, should tolerate temperatures of 80°C, must tolerate acid, should easily be cleaned, and have a fitting airlock. They should be placed somewhere of fairly constant surrounding temperature, away from light and curious neighbors. If you intend to ferment in large volumes, think the whole procedure through beforehand, as lugging a full fermenter around can become nontrivial. Placing your fermenter in a large bowl can save you a lot of scrubbing the floor in case the mash overflows. Having level marks on the outside of your fermenter is a good idea. Think about ways to control the temperature of your fermenter, such as putting a warm light bulb next to it, covering it in blankets, cooling it with a fan or water bath.

- **Water**

Water is not listed in ingredient lists, but you will need a lot of it, at a temperature suited for fermentation. Depending on where you are, your water might be chlorinated, exceedingly hard, contaminated by chemical waste, contaminated by organisms, or otherwise unfit as a resource. Think about where you get your water from, and think about it in advance!

- **Stirrer**

Have a means to thoroughly mix large volumes of viscose liquid. A wooden paddle might work, or a long, clean paint stirrer on an electric drill. It's best if the stirrer allows for stirring air into the mash as well.

- **Airlock**

Any way of covering your fermenter such that air can get out, but not in, will work. Popular methods include fermentation locks of different designs (also called airlocks) made of glass or plastic, a punctured balloon, or a hose with one end submerged in a jar of water.

- **Racking Cane**

A tool that facilitates syphoning liquid without disturbing sediment.

- **Funnel**

You will be pouring a lot of liquid, and sometimes you will be filtering it through cloth or cellulose filters. In both cases a funnel will render good service.

- **Measurement Devices**

- **Mass**

Precise measurements are unnecessary most of the time, so a simple kitchen weighing scale should suffice.

- **Volume**

Measuring cups are practical. Mark different volumes on the outside of your fermenter to easily measure large quantities.

- **Temperature**

Especially when working with enzymes, dependable temperature measurements are important. Be aware that thermometers come in different qualities and might be calibrated to be fairly exact at room temperature while deviating significantly at higher temperatures. If an ice bath is shown to be at 0°C and water at a good boil shown to be at 100°C, then your thermometer is very likely fine. Thermometers in the steam path will give you information on the steam alcohol content, but still operation based on their information is controversial.

- **Time**

For some recipes you will be required to cook or stir or rest the mash for a specified time period, but mostly a clock with the option to set an alarm will come in handy when you decide to "*just go outside for a moment*" while your fermenter fills, only to come back half an hour later after forgetting about it, to find your cellar turned into a yeast aquarium. Setting an alarm will prove invaluable.

- **pH**

Multicolored testing strips are affordable and sufficient. They should be compared to the included color chart only in good light, and they should cover the pH range 2-8 at least. Get someone with good color perception to read them for you if you have a deficiency (8% of males do, look up an **ISHIHARA test!**). A single strip can be reused many times if gently rinsed off with water after a measurement, then soaked in a big glass of water until it shows 7 (or whatever your water has) and left to dry.

- **Density**

A hydrometer (sometimes also called alcometer) can be employed to measure buoyancy, and therefor the density of the surrounding liquid. The correct use and interpretation of measurements from a hydrometer are more advanced than one would think, since factors such as temperature, air bubbles, cohesion to a glass wall will skew the readings. The ratio $\frac{\text{density of liquid}}{\text{density of water}}$ is called *specific gravity*.

- **Refractive Index**

Can be determined with a refractometer. It will give you an idea about the sugar content of a wash.

- **Taste**

Especially when doing cuts (=blending different fractions after stilling), this should be your measuring device of choice. For a good sense of taste/smell do not smoke, don't eat too spicy on days where you intend to employ it, drink water inbetween tastings, and don't have a cold.

- **Still**

A device that concentrates ethanol from a mixture of ethanol and water by evaporation and condensation.

- **Storage Of Distillate**

Stainless steel, glass and wooden barrels are considered safe for storing concentrated alcohol, plastic definitely is not. Make sure to check what material the seals or the lining on caps is made of. Wooden barrels offer some significant benefits, but they require know-how and maintenance.

0.2 Fermentation

Saccharomyces cerevisiae is a species of fungus that metabolizes some sugars (sucrose, glucose, fructose, galactose, maltose and others). In the presence of oxygen, the sugar will be used for cell growth and reproduction - a circumstance exploited when preparing a yeast starter. In the absence of oxygen, yeast will metabolize sugars to ethanol, our preferred drinking alcohol. Most fermentations will happen under the exclusion of oxygen via an airlock, which permits the outward passage of CO₂ (a byproduct of the yeast's sugar consumption) without allowing fresh air into the fermenter.

The general intention of preparing a mash is to take some form of carbohydrate, convert it to sugar if it is not already, then let yeast in a water solution convert it to ethanol. This will yield a sugar wash (from sugar), a

beer (from grain), or a wine (from fruit), which sometimes could be consumed as is, but for our intents and purposes, functions as still charge.

The conversion of long-chain carbohydrates such as starch into its building blocks, the sugar molecules, is a chemical process that can be achieved via enzymes. Those are biological catalysts, meaning they accelerate or enable reactions which then happen without consuming the catalyst. If you chew on bread for long enough, the enzymes in your saliva will convert the starch to sugar, resulting in a sweet taste. The same process takes place when adding store-bought amylase enzymes to a mash containing starch, or when adding malt, which also contains starch-splitting enzymes. The activity of enzymes is heavily dependent on both temperature and pH, so great care should be taken to get those variables right when attempting a mash with starch conversion!

Yeast competes with bacteria and other fungi for the consumption of sugars. This is why it is recommended to have a clean working habit, perhaps even sanitizing equipment that comes into contact with the mash. It is also why mashing is often done in acidic environment (=low pH). Most bacteria are hindered in such solutions, whereas yeast, while preferring neutral or just slightly acidic environments, stays active even to a pH of 3.

The success of any distillate largely depends on the mash, and therefore on the performance of the yeast. Challenges include the selection of a suited yeast strain, averting bacterial infection, and reducing yeast stress by providing stable, optimized environment variables (temperature, pH, osmotic pressure, final alcohol content, nutrients, initial cell count, initial oxygen, low light).

The considerations above allow for the following two skeletons of typical recipes, variations of which will make up most of this document:

0.2.1 Blueprint Of A Sugar Wash

Ingredients

- Water
- Sugar
- Yeast
- Yeast nutrients

Fermenting

1. Dissolve the sugar and yeast nutrients in the water.
2. At the right temperature, add the yeast.
3. Let it ferment under exclusion of oxygen.

0.2.2 Blueprint Of A Grain Mash

Ingredients

- Water
- Grain
- Enzyme source (malt or liquid enzymes)
- Yeast

Fermenting

1. Dissolve the starch from the grain in the water.
2. At the right temperature and pH, add the enzyme source.
3. Let the enzymes convert the starch to sugar.
4. At the right temperature, add the yeast.
5. Let it ferment under exclusion of oxygen.

0.3 Distillation

In a liquid mixture of two substances with different volatilities, the gas that evaporizes from it will be more saturated with the component of higher volatility. This principle is used in distillation, where one evaporates liquid (eg a mixture of water and ethanol) in a boiler and condenses the gas back to its liquid form by cooling it, yielding a mixture enriched in one component (eg ethanol).

A device that operates as above is considered a *pot still*, since the oldest still designs using a pot as boiler would evaporate and condense the liquid only once during each run, a circumstance described as a single *theoretical plate*. If on the other hand the steam is allowed to recondense and reevaporate multiple times on its way to the condenser, as is the case in a *reflux still*, then the setup is said to have multiple theoretical plates. A reflux still will give a similar result from a single distillation as would be achieved from a pot still by iterated distillation.

The typical work flow after fermentation is to rack the mash with as little sediment as possible into the boiler, and to first perform a *stripping run*. During this first fast-and-dirty distillation, the main goal is to concentrate the alcohol to a suitable level for the next distillation, although some people like to perform cuts even during the stripping run. This can be a good idea, as the volatility of some unwanted compounds changes with ethanol concentration, making them easy to separate during the stripping run, but difficult to do so later on.

The result of the stripping run, the so-called *low wines*, are collected until a sufficient amount of them accumulates to perform a *spirit run* on them. This distillation step is performed much more slowly and diligently, either in a pot still (for spirits that should keep a strong flavor profile) or in a reflux still (for neutral alcohol or very subtle flavor). Before a spirit run, the low wines should be diluted to about 40%ABV, and might benefit from being allowed to breathe while they await their run.

The distillate from a spirit run is collected in an array of small containers such as glass jars, which are used to *cut* the product from them. The process to sample them and to determine which glasses to include is sophisticated and nuanced, an excellent guide can be found on homedistiller.org, in [KI-WISTILLER's Novice Guide For Cuts](#) and in [YUMMYRUM's Better Cuts With Better Dilution](#).

0.4 Storing, Oaking & Aging

Most distillates tend to mellow and improve, if allowed to air out for a few days before (if at all) being transferred to an air-tight container. Plastic is unfit for spirit storage, since it will leach chemicals into the drink, imparting vile flavor and putting the consumer's health at risk. Glass and wooden barrels are the recommended choice for storage.

The distillate will mature, age and become more relishable even when aging in a glass bottle. Yet many recipes advise or even require to "*age on wood*". The inclusion of wood in the aging process helps to smooth the aroma profile, it imparts characteristic flavor and serves to color the drink. This operation typically called *oaking* (for the traditional use of oak as wood) depends on many variables: Whether to use a wooden barrel or to just add wood into a glass container, the choice of tree, how seasoned the wood is, to what degree the wood is toasted, to what degree the wood is charred, how much wood is used for how long, and at what alcohol concentration. There is an entire [subforum on homedistiller.org](#) that discusses and develops the art of oaking, including ways to accelerate aging through the use of pronounced temperature fluctuations ("*distress aging*") or microwaves ("*nuclear spirits*").

1 Birdwatcher Sugar Wash

Using only the most commonly available ingredients, this sugar wash will yield neutral alcohol with unsurpassed cost efficiency.

1.1 Ingredients

- 23 kg sugar
- 280 g fresh regular bakers yeast
- 1 liter tomato paste
- 4 lemons

1.2 Fermenting

1.2.1 One-time Preparation

Fill your fermenter with water. Place a bottomless styrofoam box over the fermenter. Dangle a lit lightbulb through a small hole in the lid. The bulb must be strong enough to keep the mixture at a steady range of 30°C-35°C during the entire fermentation. Stick a thermometer through a side of the box to track the inside temperature. Play around with bulbs of different strengths until you find one that keeps the filled fermenter in the desired temperature range for multiple days.

During your first actual fermentation, monitor the temperature. Due to the wash heating up by itself, you might need to decrease heating a notch.

1.2.2 Starting A Batch

1. Juice the lemons.
2. Mix the tomato paste, the lemon juice and about 14kg sugar with 75 liters of water at 30°C.
3. Measure the specific gravity. You are aiming for 1.09. Carefully add water and sugar to bring mixture to 100 liters, *with a specific gravity of 1.09*.
4. You now have 100 liters of mixed ingredients. The temperature of the finished mixture should be 30°C-35°C to start.
5. Carefully sprinkle 280 grams of yeast over the surface, stirring it in.

6. Close your fermenter, making sure the fermentation lock lets CO₂ escape. Put your box-bulb-heating system on the fermenter and switch it on.

1.2.3 During Fermentation

Check both specific gravity and temperature daily. Stir daily. On day three, syphon contents evenly into five 20 liter airlocked carboys. Shake the carboys gently daily. After a total of 7-8 days the specific gravity should be 0.995. If not, wait until completion.

2 Wineo's Plain Ol Sugar Wash

This is for making neutral alcohol, even in a pot still, without carbon filtering.

2.1 Ingredients

- 16 kg sugar
- 1 cup brewers yeast (neutral) or 2 cups of bakers yeast (flavor)
- 5 tablespoons of citric acid
- 5 tablespoons diammonium phosphate (=DAP)
- 5 tablespoons calcium sulphate (=gypsum)
- $\frac{1}{2}$ tablespoon magnesium sulphate (=epsom salts)

2.2 Fermenting

1. Dissolve the sugar in hot water.
2. Add the citric acid, DAP, gypsum, epsom salts and dissolve them.
3. Add cold water to get to 100 liters.
4. The specific gravity should be at most 1.08, ideally 1.07-1.08.
5. The pH should be 5 to 6.
6. Once the temperature is 35°C or lower, sprinkle the yeast on top.
7. After 15-20 minutes, stir it well, mixing the mash and mixing in air.
8. Cover the fermenter with a cloth or airlock.
9. After 1-2 weeks fermentation should be over. Don't rush it though, and give it another week to settle after halting. Then hit the still.

3 Pintoshine's Fast Fermenting Molasses Wash

Noteworthy for using molasses as the single source of carbohydrates, and for the high fermentation speed. This wash will yield a very light, smooth rum.

3.1 Ingredients

- 23 liters blackstrap molasses
- 4 cups bakers yeast
- 25 teaspoons diammonium phosphate (=DAP)
- 8 multivitamin tablets (one-a-day style for humans)

3.2 Fermenting

1. Fill the fermenter with 50 liters of water.
2. Fill the molasses into the fermenter.
3. Put into a separate pot:
 - (a) some water
 - (b) half of the yeast
 - (c) all of the DAP
 - (d) all of the multivitamin tablets
4. Heat that pot and let it boil for 15 minutes.
5. Pour the pot into the fermenter, and let the liquid cool if necessary.
6. Add the second half of the yeast to the fermenter.
7. Top the fermenter up with water to 100 liters.
8. Aerate the wash generously with a paint stirrer and an electric drill.
9. Put the airlock on.
10. Depending on temperature, the wash will be done after about 36 hours.

4 Harry's GGGP Rum

Next to the classical ingredients molasses and sugar, this recipe uses maize and potatoes in the mash too. To alleviate stress on the yeast coming from osmotic pressure, molasses and sugar are added in increments.

4.1 Ingredients

- 25 liters blackstrap molasses
- 9 kg sugar
- 100 g bakers yeast
- 1.7 kg old potatoes
- " $\frac{1}{3}$ of a milk bucket" of old maize
- Spices such as cloves, pineapple, rasins, vanilla.

4.2 Fermentation

1. Use a wooden fermenter such as a barrel.
2. Dissolve one third of your molasses and half of your sugar in 33 liters of warm water.
3. Stir well for 15 minutes.
4. Add the yeast once the wash temperature is below 35°C.
5. Boil the potatoes and add them in a cloth bag into the fermenter.
6. Boil the maize and add it in a cloth bag into the fermenter.
7. Stir again.
8. After 24 hours, add the second third of molasses and the second half of sugar to the wash, stirring well for 10 minutes.
9. After another 24 hours, add the final third of molasses, top your fermenter up to 100 liters with water, and stir well one last time.
10. Put the airlock on and let it ferment till it's done.

The original recipe then proceeds to tell some questionable instructions on stilling and cutting, which this author can not reproduce in good conscience - and would not recommend to anyone who values their eyesight, liver function or sense of taste. Let it suffice to say that the spirit is supposedly produced in a single distillation using only two collection vessels, with a tails cut according to ABV, and without mention of either foreshots or heads.

The more sensible instructions that follow are to store the spirit in a wooden (wine) barrel with the spices added in, to colorize it with caramelized white sugar, and generally to ferment during summer in warm weather, aging the spirit till winter, when demand for rum is higher.

5 Hook Rum

This detailed recipe follows traditional rum production practices. The spirit is recommended to be put on oak for aging, can be varied according to personal taste with spices such as nutmeg, cinnamon, vanilla, dried fruit, maple syrup, etc, and is well suited for fruit macerations.

5.1 Ingredients

- 8.3 kg raw sugar
- 11.6 liters blackstrap molasses (increase the molasses-to-sugar ratio for more taste)
- 250 g bakers yeast
- 3 good teaspoons diammonium phosphate (=DAP) or tomato paste
- Either 33 liters dunder (+calcium carbonate), or 2 teaspoons citric acid
- Optionally: Half the lees from the previous fermentation

5.2 Fermenting

1. Throw the sugar, molasses and DAP into your fermenter.
2. Fill it halfway with hot (dunder and) water.
3. Stir well for a few minutes, dissolving everything and sanitizing the vessel.
4. Cover it and let it cool overnight.
5. Top up with plain, clean, well airated water to 100 liters.
6. Make sure the ferment is well airated.
7. Pitch the yeast straight onto the surface.
8. Cover the fermenter loosely, need not even use an airlock.
9. Once fermentation is finished, give it 2 days, then siphon the wash into another container.
10. Give it another nofew days, then siphon the wash into your still and run it.

5.3 Stripping Run

1. Collect down to about 20%ABV (which means a temperature of 98°C in the steam path), or even 10%ABV (99°C steam temperature).
2. Use some of the hot dunder to dissolve the ingredients for the next batch. If possible, allow suspended crap to settle first, and only use the liquid. Add calcium carbonate whenever the dunder becomes too acidic. If you're not doing the next batch right away, then either freeze some dunder or dilute it with neutral spirit so it doesn't spoil.
3. Dilute low wines to 40%ABV.
4. Cover low wines allowing them to breathe, and let them sit for one week.

5.4 Spirit Run

1. Fill your still with low wines at 40%ABV.
2. Add some fresh wash, about $\frac{1}{10}$ of the low wines, more/less for more/less flavor. Leave more headspace if you do this.
3. Collect and make cuts. Cut heads/hearts as usual, but cut hearts/tails rather late. Follow one of the guides mentioned in chapter .
4. Toss the foreshoots, but keep the heads and tails. You can slowly run them once there's enough of it.
5. Optionally do a third distillation step. It will yield a lighter, more refined rum with less flavor.

6 Pugirum

This recipe has a very special spin on the traditional recycling of feints within continuous rum production. The product is a rich, complex, dark rum.

6.1 Ingredients

- 4.8 kg brown cane sugar
- 20 liters feed molasses
- 2.6 cups bakers yeast
- 30 liters dunder (use water on the first cycle)
- 10 liters yeast bomb (only when necessary)

6.2 Yeast Bomb

The yeast bomb should be added to the initial fermentation. During later cycles whenever fermentation becomes slow, add a yeast bomb to the next wash. To make a yeast bomb for 100 liters, use

- $\frac{2}{3}$ cup bakers yeast
- 1 level teaspoon magnesium sulphate (=epsom salts)
- 13 teaspoons 20-0-0 agricultural fertilizer
- 5 vitamin B tablets
- 10 liters water

and boil all of it for 15 minutes, then strain the liquid, giving you 10 liters of yeast bomb.

6.3 Fermenting

1. Use a large fermenter with plenty of headspace, the wash will foam up.
2. Mix molasses and water in another vessel and heat it to 85°C.
3. On the next day rack the liquid into your fermenter, leaving sludge behind.

4. Add the other ingredients to your fermenter once it's cold enough not to kill the yeast.
5. Put the fermentation lock on.
6. After 36h fermentation should be done. Give it another day to settle.

6.4 Stripping Run

1. Drain the fermenter, but leave the bottom 5% in there. Just put the next wash on top of it.
2. Perform a stripping run on the drained liquid, go as fast as possible.
3. Repeat the above until you have enough low wines for a spirit run.

6.5 Spirit Run

1. Load your still with low wines. On cycles after the initial one, also add an equal amount of dunder, as well as all your rum oils (see below).
2. Run it easy, not too fast, not too slow.
3. Make your heads/heads cut as usual, throw the heads into your heads container and don't use them for this rum.
4. Collect hearts until just before you get wet cardboard taste.
5. Collect wet cardboard spirits and throw them into your tails container. Don't use them for this rum.
6. Collect the last fraction down to about 20%ABV, put them in a container labeled *rum oils*. Always add them before a spirit run, and always collect them during a spirit run for this rum.
7. On the next day, rack some dunder out of the still and keep it.
8. Add spices to the collected hearts: pineapple fruit ($\frac{1}{4}$ slice per liter), cloves ($\frac{1}{4}$ per liter), raisins (4grams per liter).
9. Shake it every now and then for one month.
10. Cut to drinking strength.
11. Caramelize sugar in a pan, making sure not to burn it, while letting it change color to a dark tone. Add an amount of your liking to the rum.

7 **Buccaneer Bob's Silver/Gold/Black Rum**

This fairly traditional recipe allows for not just a single product, but for three variations of a single rum. A unique feature is the addition of dunder to the final spirit. BUCCANEER BOB himself has crafted [a .pdf with instructions](#), both detailed and beautiful to behold, so go check it out!

7.1 **Ingredients**

- 15-20 liters blackstrap molasses, depending on viscosity. 15 if it has a consistency like putty at room temperature, 20 if it flows like syrup.
- 12.5 kg sugar
- 175 g fresh bakers yeast
- 5 liters yeast trub from the previous batch, or 1 kg yeast
- 10 liters infected dunder
- 10-15 lemons or limes
- 250 cm³ oak/apple/pecan/etc wood for aging

7.2 **Fermenting**

1. Pour the molasses into a heat-tolerant vessel of 100 liters capacity **other than** your fermenter. Cover the vessel.
2. Put the yeast trub, dunder and some water into a large pot.
3. Bring the pot to a boil. Stir occasionally.
4. Pour the boiling pot onto the molasses. Stir to dissolve the molasses.
5. Add water to bring the volume to about 75 liters.
6. Add the juice from the lemons or limes. Stir again.
7. Let the mixture rest for exactly 2 hours.
8. Rack the liquid into your fermenter, leaving sediment behind.
9. If necessary add water to bring your fermenter to $\frac{3}{4}$ full.
10. Let the mixture cool to below 35°C.

11. Pour about 2 liters of the wash into a jar, add the fresh yeast, and shake till the yeast is dissolved. Then pour that back into your fermenter.
12. Aerate the wash.
13. Place the fermenter in a cool spot, and put the airlock on.
14. Once the foam disappears (after 2-3 days), carefully stir the wash.
15. Slowly add the sugar, stirring well to dissolve it.
16. Add fresh water to bring the fermenter to almost full.
17. Put the airlock on, let it ferment till it's done (10-15 days at 20°C).
18. Rack the liquid into your still. Save the yeast trub for the next run.

7.3 Stripping Run

1. Filter the distillate through medium-weight cotton cloth as it drips out.
2. Collect in 1 liter bottles.
3. Collect till the distillate doesn't smell or taste of alcohol any more.
4. Let the still cool down.
5. Rack 1 liter of dunder into a tall, slender, 2 liter glass bottle. Add 1 liter of hearts from a previous run, and let that bottle sit undisturbed.
6. Save some dunder for infection, use the remainder as fertilizer.
7. Examine each bottle in sunlight for oily film on the surface. Remove oil if there is any. Skim them off with a spoon or wick them off with cloth, cotton wool or a paper towel.
8. Clean your still.

7.4 Spirit Run

1. Charge the still with low wines and tails from previous runs.
2. Dilute the charge to a suitable level with water.
3. Filter the distillate through cloth again.

4. Start off running slow and go faster once you're out of the heads.
5. Collect till the distillate doesn't taste of alcohol any more.
6. Let the still cool down, then clean it.
7. Examine distillate for oils and remove them, as before.
8. Set some hearts aside for future dunder essence, then make cuts.

7.5 Oaking And Blending

1. Put your hearts cut onto oak (or other wood). Use natural or only slightly toasted wood for the *Silver Rum*, and toast/char according to taste for *Gold* and *Black Rum*.
2. Monitor the oaking process. Take the wood out after a few days once it has rounded the edges of the fresh rum when making a *Silver Rum*. Remove it from *Gold* or *Black Rum* whenever it has imparted enough flavor and color.
3. Now that your dunder essence has had time to settle, carefully rack off the clear liquid. Add the remainder to your next still charge.
4. Dilute the spirit to drinking strength.
5. Add about 3% dunder essence to a *Gold Rum*, and about 6% to a *Black Rum*. This might make the rum cloudy, so give it time to settle, then rack it off before bottling. Add remainders to the next still charge.

8 Uncle Remus' Rice Vodka

This will yield a delicate, extremely neutral spirit. It requires fancy ingredients, a relatively long fermentation and precise temperature control on the fermenter. A variation of this recipe uses malt instead of enzymes to introduce a malt whiskey flavor.

8.1 Ingredients

- 12 kg white long grain rice
- 7 kg sugar
- 3 packages EC 1118 yeast
- 6 tablespoons alpha amylase
- 6 tablespoons gluco amylase

8.2 Fermenting

1. Hydrate the yeast and make a starter out of it, to be used hours later.
2. Boil the rice in 60 liters of water for 10 minutes.
3. Let the rice rest for one hour.
4. Add 15 liters of cold water and let the mixture cool to 66°C.
5. At 66°C, add the alpha amylase and close the vessel.
6. After 90 minutes, add the sugar and allow further cooling.
7. At 30-35°C, add the yeast starter and the gluco amylase.
8. Aerate the mixture thoroughly.
9. Put on the airlock.
10. Temperature control the fermenter to 20-22°C.
11. Don't open or stir, leave it till its done. It should take about one week.

9 Rad's All Bran & Rad's Gerber

This ridiculously easy, fast, and dependable recipe was conceived to eliminate the use of turbo yeasts. It can be used to make a whiskey-like spirit, if run through a pot still, or neutral alcohol, if run through a reflux column.

9.1 Ingredients

- 18 kg sugar
- 5 kg *All Bran* cereal or 5 kg *Gerber* barley baby cereal. Those are cereals with added minerals and vitamins, which act as yeast nutrients. Substitute a similar enriched product if they're unavailable.
- 370 mL fresh bakers yeast

9.2 Fermenting

1. Simmer the sugar in an equal amount of water for 30 minutes.
2. Pour the sugar solution into your fermenter.
3. Top up with fresh water to almost 100 liters.
4. Add the crushed cereal.
5. Once the mixture cools to 35°C, pitch the yeast.
6. Aerate for one hour.
7. Put on the airlock and let it ferment. It should be done after 7 days.

10 **Odin's Cornflakes Whiskey**

Want to make a bourbon whiskey but got no access to good maize? With this recipe, to quote HEARTCUT, ” *You could almost have whiskey for breakfast*”.

10.1 **Ingredients**

- 2.5 kg maize cornflakes with B vitamins
- 17.5 kg sugar
- An unspecified amount of yeast
- 25 liters backset (or water when starting the cycle)

10.2 **Fermenting**

1. Crush the cornflakes.
2. Boil the cornflakes in backset (or water) for 30 minutes.
3. Pour them into your fermenter with fresh water.
4. Once the temperature is below 35°C, add the yeast.
5. Put on the airlock and let it ferment till it's done (about 5 days).

11 Odin's Rye Bread Whiskey

This will yield a rye whiskey with a lot of flavor, beginning from generation one. The fermentation should be allowed to finish, which will take some time.

11.1 Ingredients

- 7 kg dense rye bread (like **pumpernickel**) without preservatives
- 14 kg sugar
- An unspecified amount of yeast
- An unspecified amount of yeast nutrients (this can be left out, especially on later iterations when using backset)
- Optionally: 18 liters backset from the previous run

11.2 Fermenting

1. Crumble the bread and boil it in water for 5 minutes.
2. Add the sugar and stir well to dissolve it.
3. Pour the mixture into your fermenter.
4. Add backset if you have any.
5. Top the fermenter up to 100 liters with fresh water.
6. Add the yeast nutrients.
7. Aerate the mixture.
8. Add the yeast once the mixture has cooled below 35°C.
9. Put the airlock on and give it time to ferment out fully, which should take anywhere between one and two weeks.

12 Deathwish Wheat Germ

In this sugar wash for neutral alcohol, wheat germ is used mainly for yeast nutrients, but also to add a bit of scotch-like flavor to the spirit.

12.1 Ingredients

- 20 kg sugar
- 22 g *Redstar Premier Blanc* champagne yeast
- 2 kg wheat germ
- 5 tablespoons of citric acid

12.2 Fermenting

1. Put the sugar, wheat germ and citric acid into a pot.
2. Fill the pot to about 80 liters with water.
3. Heat the mixture up until it cooks.
4. Let it cook for 90 minutes.
5. Top it up to 100 liters with water.
6. Let it cool.
7. Add the yeast.
8. Put the airlock on and let it ferment till it's finished.

13 **Kentucky Shinner's Sweetfeed Whiskey**

A continuous mashing process for whiskey made from animal feed and sugar.

- 20 kg sweet feed, only on the first run
- 20 kg white sugar, on each run
- 500 mL dry yeast, only on the first run
- 50 liters backset, on each run

13.1 **First Fermentation**

1. Throw the sweet feed into your fermenter.
2. Bring 20 liters water to a hard boil, then add them.
3. Add the sugar.
4. Stir well for 15 minutes.
5. Let the mixture rest for 90 minutes.
6. Add fresh, cool water to bring the volume to 100 liters.
7. Once the temperature is below 35°C, add the yeast.
8. Stir the mixture gently.
9. Put on the airlock and let it ferment till it's done (about 6 days).
10. Rack the mash into your still, keeping the lees in the fermenter.

13.2 **Subsequent Fermentations**

1. Right after stilling the previous batch, dissolve 20 kg sugar in 50 liters hot backset.
2. Let the backset slowly cool to below 35°C.
3. Pour the backset into your fermenter, which still contains the lees.
4. Add fresh water to bring the volume to 100 liters.
5. Put on the airlock and let it ferment till it's done (about 6 days).

6. Rack the mash into your still, keeping the lees in the fermenter.
7. Iterate the process.

14 Uncle Jesse's Simple Sour Mash Method

One of the most popular recipes, the often endearingly abbreviated *UJSM* is a continuous mashing process with simple ingredients, yielding a whiskey.

14.1 Ingredients

- 16.8 kg cracked (6-8 pieces per kernel) maize without preservatives on the first run and small amounts later
- 16.8 kg sugar on each run
- 5 tablespoons yeast, if possible distillers yeast, only on the first run
- 25-50 liters backset from the previous run, on each run

14.2 First Fermentation

1. Into your fermenter with fresh water, throw the maize, sugar and yeast.
2. Dissolve the sugar.
3. Put the airlock on and let it ferment till it's done (3-4 days).
4. Rack the liquid into your still and run it later that day. Be careful not to disturb the lees, leaving them in your fermenter.
5. Add some fresh water to your fermenter to make the yeast happy.
6. Replace maize that's floating on the surface.
7. Run your still now, keep some backset, then proceed as instructed for subsequent fermentations.

14.3 Subsequent Fermentations

1. You have a fermenter with old yeast, old and fresh maize and some water in it. You also have (ideally hot) backset from the previous run.
2. Dissolve 16.8 kg sugar in the backset.
3. Let the backset cool to below 35°C.
4. Add the backset to your fermenter.

5. If necessary top your fermenter up to 100 liters with fresh water.
6. Make sure the liquids have mixed in your fermenter.
7. Put the airlock on and let it ferment till it's done (3-4 days).
8. Rack the liquid into your still and run it later that day. Be careful not to disturb the lees, leaving them in your fermenter.
9. Add some fresh water to your fermenter to make the yeast happy.
10. Replace maize that's floating on the surface.
11. Run your still now, keep some backset, and iterate the process.

15 Simple Golden Pond Mash

This old-timey moonshiner's recipe uses wild yeast to ferment. The product can be consumed as moonshine after the stripping run, or it can be distilled a second time and put on oak to yield a whiskey.

15.1 Ingredients

- 45 kg air-dried cracked maize on the first run and small amounts later
- 25 kg sugar on each run
- All of the backset from the previous run

15.2 First Fermentation

1. Use a wooden barrel as your fermenter.
2. Mix the maize, sugar and warm water in your fermenter.
3. Cover the fermenter with a wire screen or a piece of cloth.
4. Let it ferment for 5-7 days. When large single bubbles come about 20-30 seconds apart, it is ready for the still. It is better to run it a day early than a day late.

15.3 Stripping Run

1. Rack the mash into your still, leaving the lees undisturbed.
2. On later runs, add the tails from the previous run to the charge.
3. Collect spirits down to 40% ABV, then collect tails down to 22% ABV.
4. Strain the spirits through a heavy white felt hat, possibly with two handful of hickory charcoal in it.

15.4 Subsequent Fermentations

1. Let the backset cool to about 35°C.
2. Replace about 10% of the maize in the backset with fresh one.
3. Dissolve 25 kg sugar in the warm backset.

4. Pour the backset onto the lees in your fermenter.
5. Add fresh water to bring the fermenter to 100 liters.
6. Stir up the lees.
7. Cover the fermenter with a wire screen or a piece of cloth.
8. Let it ferment for 5-7 days. When large single bubbles come about 20-30 seconds apart, it is ready for the still. It is better to run it a day early than a day late.
9. This mashing process can be iterated about four times.

16 Booner's Casual All Corn

This recipe removes much of the challenge that comes with mashing nothing but maize by employing store-bought enzymes.

16.1 Ingredients

- 21.5 kg cracked maize
- An unspecified amount of yeast
- pH testing strips (or similar equipment)
- 17 mL *SEBStar* alpha amylase
- 17 mL *SEBAmy* gluco amylase
- Optionally: Backset from the previous run

16.2 Fermenting

1. Heat a suitable amount of water to 90°C.
2. Add the maize while stirring.
3. Let the mixture cool to 82°C.
4. Measure pH and adjust to the 5.6 - 6.5 range if necessary.
5. Add the alpha amylase.
6. Let the mixture cool to 64°C, stirring occasionally.
7. Measure pH and adjust to the 2.8 - 5.5 range. This can be done by adding backset.
8. Stir the mixture well, then cover it and let it rest overnight.
9. Once the temperature is below 35°C, pitch the yeast.
10. Put the airlock on and let it ferment till it's done (about 4 days).

17 **Pintoshine's Double Fermented Sour Corn Mash**

This traditional maize-and-malt recipe for whiskey ferments with bacteria to get a sour mash before adding in yeast.

17.1 **Ingredients**

- 38 kg ground whole maize
- 5 kg rolled malted barley
- An unspecified amount of yeast

17.2 **Fermenting**

1. Pour water on top of the ground maize such that it is completely covered, plus half that height of water sitting above the maize.
2. Let it ferment to lactic acid until it doesn't rise anymore. If you happen to have a sour dough starter, you can add some of that. Punch down the germ that floats on top each day. This should take about four days. The mash might smell like vomit in the beginning, that's alright - in the end it should smell like sour milk.
3. Add water to not burn the paste when heating it, but only that much.
4. Carefully heat the paste to 80°C for 30 minutes. Stir constantly.
5. Let it cool to 70°C.
6. Stir in the malted barley and keep it close to 70°C for 90 minutes.
7. Let the mash cool to about 35°C. It should have gone from gel to liquid.
8. Filter the mash through a large, loose weave piece of cloth.
9. If your specific gravity now is at roughly 1.09, you can pitch the yeast. If you added more water earlier, then you could first put it on the stove once more to reduce the volume and increase gravity, but you'll have to stir like a madman and wait for the mash to cool to below 35°C again.
10. Put the airlock on and let it ferment till it's done.

18 NChooch's Carolina Bourbon

A classic recipe for a classic whiskey, the all-American bourbon. Age on oak!

18.1 Ingredients

- 16 kg cracked maize
- 7 kg malted 6-row barley
- 50 g dried yeast

18.2 Fermenting

1. Bring about 70 liters of fresh water to a boil.
2. Stir in the maize, and let it simmer for 90 minutes, making sure not to burn it.
3. Optionally you can add 1 kg malt while it simmers for liquification.
4. Let the mixture cool to 65°C.
5. Add the malt and stir it in well. Temperature should be at 62°C now.
6. Cover the vessel and wrap it in towels or blankets. Stir it from time to time, then let it rest overnight while slowly cooling.
7. Transfer the whole mixture to your fermenter (don't strain it!) and bring it to 100 L with water or backset.
8. Once the mixture is below 27°C, aerate well and stir in the yeast.
9. Put the airlock on and let it ferment till it's done (about 3 days).
10. When fermentation is over, hit the still soon afterwards. There is no need to let the mash clear, just strain the grains.

19 Jimbo's Wheated Bourbon & Gumball-head

By exploiting synergies between all-grain-mashing and a successive sugarhead fermentation, this recipe is fit to satisfy *cheap bastards with expensive tastes*.

19.1 Ingredients

- 17 kg cracked maize or 12.5 kg maize meal
- 3.9 kg milled wheat malt
- 2.3 kg milled barley malt or an additional 2.3 kg milled wheat malt
- 12.5 kg sugar
- 25 g good ale yeast
- 13 liter backset (or water with lactic acid)
- 7 teaspoons calcium sulphate (=gypsum)

19.2 Fermenting Wheated Bourbon

1. If using cracked maize, wash it with warm water and drain it.
2. Bring 60 liters water, the backset and the gypsum to a boil.
3. Turn the heat off and stir in the maize.
4. Cover the pot and wrap it in blankets. Let it rest overnight.
5. The next day, remove the blankets and stir the mixture. Let it cool to 63°C, which can be accelerated by pointing a fan at it.
6. At 63°C, wrap the pot in blankets again and stir in the malt.
7. For 90 minutes, stir occasionally. Then remove the blankets again.
8. Pour the mixture into your disinfected fermenter, and top it up to 100 liters. Try to cool it to 27°C fast to reduce infection risk.
9. At 26°C, pitch the yeast and stir it in.

10. Put the airlock on and let it ferment till it's done. It will be mostly done after 4 days, but you will get a better product if you leave it to ferment for 5-7 days. Don't go beyond a week though, as the risk for infection will rise.
11. Filter the mash through a large mesh grain bag. Let the liquid settle overnight and then rack the clear mash into your still. Any sediment or filtered grain is not to be discarded, as it will be used for Gumballhead production!

19.3 Fermenting Gumballhead

1. Take 13 liters hot backset from the Wheated Bourbon stripping run and dissolve the sugar in it.
2. Add fresh water so you will get 100 liters after step 3.
3. Once the mixture is below 26°C, add the filtered-off grain and the bottom layer that was left when racking mash into the still.
4. Pour the mixture into your fermenter.
5. Put the airlock on and let it ferment till it's done (about 4 days).

20 **Shineon Crazy Diamond's Honey Bear Bourbon**

Fermenting on the grain and especially the use of honey malt give this bourbon a unique character. The use of crushed oyster shells is to buffer pH.

20.1 **Ingredients**

- 12 kg cracked maize or 8 kg maize meal
- 2 kg rolled oats (or 2 kg additional maize for less mouth feel)
- 2 kg white wheat malt
- 2 kg red wheat malt
- 2 kg pale malt
- 1 kg honey malt
- An unspecified amount of yeast
- 4 handful oyster shells

20.2 **Fermenting**

1. Put the maize, honey malt and oats into your fermenter.
2. Bring 80 liters water to a boil in a pot.
3. Pour the water into your fermenter, wrap it in blankets and stir occasionally while it slowly cools.
4. Once the mash temperature falls to 67°C, stir in all the malt.
5. Wrap the fermenter up again and let it rest for a few hours.
6. Chill the mash to the yeast's preferred temperature.
7. Crush the oyster shells and stir them in.
8. Stir in the yeast.
9. Put the airlock on and let it ferment till it's done (about 4 days).

21 Uncle Jesse's Cooked Rye Mash

This recipe for an all-rye whiskey might look simple, but a lot can go wrong, so consider it one of the more advanced ones. The forum thread discusses variations and modernizations.

21.1 Ingredients

- 24 kg malted rye
- 3 teaspoons distillers yeast

21.2 Fermenting

1. Mill the malted rye, not too finely though, if it is not already.
2. Use a big pot (at least 120 liters) with a false bottom.
3. Bring 60 liters of water to a hard boil to sanitize your pot.
4. Add 60 liters fresh water.
5. Bring the temperature to about 75°C, then turn off the heat.
6. Stir in the rye. Temperature should drop to about 64°C.
7. Cover the pot, let it sit for at least 1 hour, stirring every 15 minutes.
8. Optionally test starch conversion with a solution of iodine.
9. Drain the mash into your fermenter, filtering it through the false bottom and leaving behind the grain. The mash need not be clear.
10. Once the mash is cold enough, aerate it and stir in the yeast.
11. Put the airlock on and let it ferment till it's done (about 3 days).

22 Jimbo's Single Malt All Grain

One of the easiest all-grain recipes, due to both its use of milled malt as well as the simple, precise instructions.

22.1 Ingredients

- 18 kg milled red wheat malt or milled barley malt
- 20 g dried yeast
- 4 teaspoons calcium sulphate (=gypsum)
- Optionally: Backset from the previous run

22.2 Fermenting

1. Dissolve the gypsum in 65 liter hot water (and backset).
2. When the temperature is at 71°C, stir in the malt.
3. Put the lid on loosely, wrap the vessel in blankets and stir every 15-30 minutes for a few hours.
4. Remove the blankets and quickly cool the mash to your yeast's preferred temperature, eg by pointing a fan at the vessel.
5. Add fresh water to get to 100 liters and stir well to aerate.
6. Pitch the yeast and let it ferment on the grain till it's done (1-2 weeks).
7. Rack the mash off from the top and let it settle overnight if necessary.
8. Squeeze the goo near the bottom of your fermenter through a cloth to get the liquid out. Let that liquid settle overnight and rack it off.

23 Theholymackerel's Oat Whiskey

This oat whiskey has a mild, subtle flavor and should not necessarily be put on oak. Make sure to age at least some of it white for few months!

23.1 Ingredients

- 24 kg oatmeal
- An unspecified amount of amylase enzyme
- An unspecified amount of neutral ale yeast

23.2 Fermenting

1. Put the oatmeal into your fermenter.
2. Add boiling water to bring the volume to 100 liters.
3. Stir well, then insulate your fermenter.
4. Allow the mixture to slowly cool to 65°C.
5. Add some amylase, stirring it only into the top layer.
6. Cover the fermenter and let it cool to 24°C.
7. Add some more amylase and the yeast, again stirring only the top layer.
8. Cover the fermenter and put the airlock on.
9. Each day, stir the liquid top layer a few centimeters into the sediment below it, then put the lid and airlock on again. Repeat this, until the whole mash has become thin liquid.
10. Let it ferment until it is finished (about two weeks total).
11. Rack the liquid into your still, leaving the yeast sediment behind.
12. Run the still slow and careful to not burn the mash badly - a little burn will likely go unnoticed in the spirit.

24 Uncle Remus' Apple/Alder Wood Smoked Barley Whiskey

24.1 Ingredients

- 14 kg smoked rolled barley. You can smoke it with apple and alder wood, see the thread on homedistiller.org for instructions with pictures.
- 3 kg rolled maize
- 3 kg ground pale ale barley malt
- An unspecified amount of yeast
- 16 g alpha amylase enzyme
- 16 g gluco amylase enzyme

24.2 Fermenting

1. Heat 80 liters water to 74°C.
2. Stir in the maize and the smoked barley.
3. Heat it up to 74°C again, then turn off the heat.
4. Cover the pot, let it slowly cool, and stir every so often.
5. At 67°C, stir in the malt and alpha amylase.
6. Cover the pot and let it rest for at least 2 hours.
7. Cool the mash to 35°C, then stir in the yeast and gluco amylase.
8. Put the airlock on and let it ferment.

25 Bentstick's Oat/Wheat/Rye Whiskey

25.1 Ingredients

- 8.5 kg whole oats with huskes (milled to bust husks, no more)
- 5 kg wheat
- 5 kg rye
- 3.5 kg malted wheat
- 3.5 kg malted rye
- An unspecified amount of yeast
- An unspecified amount of alpha amylase enzyme
- An unspecified amount of gluco amylase enzyme

25.2 Fermenting

1. Put the oats, wheat and rye (none of the malt!) into your fermenter.
2. Add 70 liters boiling water and mix well, eg with drill and paint stirrer.
3. Once the mixture cools to 82°C, add the alpha amylase and stir.
4. Once the mixture cools to 65°C, add the gluco amylase and both malts. Again, stir well.
5. Let it rest over night, stirring every now and again at the beginning.
6. Add cold fresh water to get to 100 liters.
7. Cool the mix to below 35°C, then pitch the yeast.
8. Put the airlock on and let it ferment.

26 's

26.1 Ingredients

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26.2 Fermenting

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